



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,951	03/17/2004	William F. DeGrado	1694.0630003	2895

26111 7590 03/29/2007  
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
----------

CHONG, YONG SOO

ART UNIT	PAPER NUMBER
----------	--------------

1617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/801,951

Applicant(s)

DEGRADO ET AL.

Examiner

Yong S. Chong

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 15-51, 54-59, 62, 63 and 65-68 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 15, 49-51, 54-59, 62, 63, 65 and 66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16, 18, 20-25 and 28-47 is/are rejected.
- 7) ☒ Claim(s) 17, 19, 26-27, 48, 67-68 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/12/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Application***

This Office Action is in response to applicant's response filed on 1/29/2007.

Applicant's election **with** traverse of the restriction requirement in the reply is acknowledged. The traversal is on the ground(s) that all groups share the common structural feature of amphiphilicity and the common utility of effectiveness in the claimed method. Specifically, Groups I-III all require x and y to form amide linkages and all are listed as being within the same classification. This is not found persuasive because the claimed invention was not grouped under amphiphilicity but under common structural cores. Further, although the classes for the groups may be the same, a search for one group will not lead to another based on the non-patent literature. Furthermore, although Groups I-III all require x and y to form amide linkages, this subset of the claimed invention was further restricted based on the presence or absence of carbocyclic and/or heterocyclic groups. The requirement is still deemed proper and is therefore made FINAL.

Claim(s) 1-12, 15-51, 54-59, 62-63, 65-68 are pending. Claim(s) 16, 49-50 been amended. Claims 66-68 are new. Claims 13-14, 52-53, 60-61, 64 have been cancelled. Claim(s) 1-12, 15, 49-51, 54-59, 62-63, 65-66 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claim(s) 16-48, 67-68 are examined herein insofar as they read on the elected invention.

Art Unit: 1617

The species election (last compound for claim 68) is free of the prior art. The search will now be broadened to the full scope of the claims as it reads on the elected invention.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 16, 18, 20-25, 28-47 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 14-15, 26, 29 of U.S. Patent No. 7,173,102 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method of killing microorganisms by contacting a surface with a compound of formula II is disclosed. The specific embodiments of formula II are discussed below.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim(s) 16, 18, 20-25, 28-47 are rejected under 35 U.S.C. 102(e) as being anticipated by DeGrado et al. (US Patent 7,173,102 B2).

DeGrado et al. disclose facially amphiphilic polymers and articles made therefrom having biocidal surfaces that inhibit the growth of microorganisms in contact with the surface or in areas adjacent to said biocidal surface (abstract, claims 26 and 29). A preferred polymer or oligomer is represented by a compound of formula II, where X can be NR<sub>3</sub> (where R<sub>3</sub> is hydrogen), O, S; Y can be CO; both A and B are independently optionally substituted o-, m-, p-phenylene, or optionally substituted heteroarylene wherein one of A and B is substituted with a polar (P) group and a nonpolar (NP) group and the other of A and B is substituted with neither a polar nor a nonpolar group; NP can be R<sub>4</sub>, -U-(CH<sub>2</sub>)<sub>p</sub>-R<sub>4</sub>, wherein R<sub>4</sub> can be hydrogen, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>3</sub>-C<sub>18</sub> branched alkyl, P is a polar group selected from hydroxyethoxymethyl or -U-(CH<sub>2</sub>)<sub>p</sub>-V, where U is O or S and V can be amino, guanidine; p is 0 to 8; and m is 2 to at least 500 (claim 14).

***Claim Objections***

Claim(s) 17, 19, 26-27, 48, 67-68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

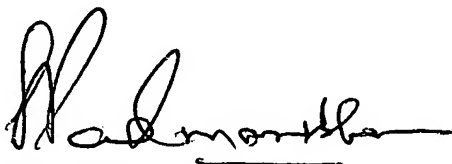
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong S. Chong whose telephone number is (571)-272-8513. The examiner can normally be reached on M-F, 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SREENI PADMANABHAN can be reached on (571)-272-0629. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YSC

  
SREENI PADMANABHAN  
SUPERVISORY PATENT EXAMINER